WHAT IS CLAIMED IS:

1. An information recording medium in which recording information including video information is coded at a variable transfer rate and is recorded as coded information, wherein the coded information is read and decoded in accordance with a decoding process to decode the video information, a variable transfer rate of the coded information is set with respect to a reproducing rate, in such a manner that an average rate of the variable transfer rate for each specific interval is smaller than the reproducing rate, and a value of the variable transfer rate larger than that of the reproducing rate is permitted for a peak rate.

2. The information recording medium according to claim 1, wherein the recording medium comprises media exclusively for reproduction.

3. The information recording medium according to claim 1, wherein the average rate is in a range of -5% to -15% of the reproducing rate.

4. The information recording medium according to claim 1, wherein the recording information is information such as video, sound, and characters, the recording information is coded at the variable transfer rate and constituted as a plurality of object units, the plurality of object units are connected to one another to constitute/form a video program, the video program includes a multi-scene program portion in which

a plurality of optionally selectable branch scenes exist, a recorded state of the multi-scene program portion is such that the plurality of branch scenes are each divided into a plurality of cells constituted of the plurality of object units and the cells of the respective branch scenes are recorded in a time-division multiplexed form, and the time of the specific interval is set to be not more than a reproducing time of each cell.

5. The information recording medium according to claim 1, wherein the recording information is information such as video, sound, and characters, the recording information is coded at the variable transfer rate and constituted as a plurality of object units, the plurality of object units are connected to one another to constitute/form a video program, the video program includes a multi-scene program portion in which a plurality of optionally selectable branch scenes exist, a recorded state of the multi-scene program portion is such that the plurality of branch scenes are each divided into a plurality of cells constituted of the plurality of object units and the cells of the respective branch scenes are recorded in a time-division multiplexed form, and the average rate is set for each cell.

6. An information recording medium in which recording information including video information is

coded at a variable transfer rate and is recorded as coded information, wherein the coded information is read and decoded in accordance with a decoding process to decode the video information, a variable transfer rate of the coded information is set with respect to a reproducing rate in such a manner that an average rate of the variable transfer rate for each specific interval is smaller than the reproducing rate, and a value of the variable transfer rate larger than that of the reproducing rate is permitted for a peak rate,

the coded information is coded at the variable transfer rate and constituted as a plurality of object units, the plurality of object units are connected to one another to form a video program, the video program includes a multi-scene program portion in which a plurality of optionally selectable branch scenes exist, a recorded state of the multi-scene program portion is such that the plurality of branch scenes are each divided into a plurality of cells constituted of the plurality of object units and the cells of the respective branch scenes are recorded in a time-division multiplexed form, and

assuming that an actual reproducing time is Tp that is a decoding time for decoding video in a read cell, and a read time is Ts that is a searching time for searching a next cell to the read cell by the pickup, in order to satisfy a relation condition of

$Tp+(Vop-Vr)\div Voa > Ts$, the plurality of cells are divided, time-division multiplexed, and arranged.

7. An information processing apparatus in which information such as video, sound, and characters is constituted as a plurality of object units coded at a variable transfer rate, the plurality of object units are connected to one another to constitute/form a video program, the video program is recorded in a recording medium, and data is read from the recording medium and sent to a decoding processing section to demodulate original video or sound information, the apparatus comprising:

means for setting an average rate for each specific interval to be smaller than a reproducing rate of the recording medium with respect to the variable transfer rate and for permitting a value larger than that of the reproducing rate for a peak rate.

8. An information reproducing apparatus to reproduce recording information of an information recording medium in which information such as video, sound, and characters is coded at a variable transfer rate to constitute a plurality of objects, the plurality of object units are connected to one another to constitute a video program, the video program includes a multi-scene program portion including presence of a plurality of optionally selectable branch scenes, and the multi-scene program portion is recorded

in such a state that the plurality of branch scenes are divided into a plurality of cells constituted of a plurality of object units and the cells of the respective branch scenes are recorded in a time-division multiplexed form,

wherein in the recording medium, a variable transfer rate determined by a coding amount of the information of the video, sound, and character s is recorded as a coded signal with respect to a reproducing rate of the recording medium in such a manner that an average rate for each specific interval time is smaller than the reproducing rate of the recording medium after the recording, and a value larger than that of the reproducing rate is permitted for a peak rate, and

assuming that a time to search the next continuous data cell from the cell of a time-division multiplex unit is Ts, a data buffer memory which satisfies a relation of $(Voa \times Ts) + (Vop - Vr) \times Ti < Bm$, and data control means are used.

9. An information processing method in which information such as video, sound, and characters is coded at a variable transfer rate and constituted as a plurality of object units, a video program constituted by connection of the plurality of object units is recorded in a recording medium, and the video program is read from the recording medium and sent to a

decoding processing section to demodulate original video and sound information, the method comprising:

coding the information at a transfer rate which is lower than a reproducing rate of the recording medium with respect to the variable transfer rate; and coding the information at a peak rate which is larger than the reproducing rate in a timing which is not less than a pre-designated interval.